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OVERHAUL MOSCOW INSTRUMENTS PLANT; DESIGN FLAMELESS GAS STOVE

REMODELS PLANT ON CONVEYER SYSTEM -- Moscow, Trud, 17 Aug 50

The Moscow Instruments Plant is one of the leading enterprises in the capital. For more than 3 years it has held a top place in the All-Union socialist competitions. Beginning with the fourth quarter of last year, it has won supremacy among the plants of the Ministry of Machine and Instrument Building.

The plant has been radically remodeled. Actually, only the framework has remained unchanged. Technology, production processes, and labor have all been reorganized. It is the first of the instrument-building plants to use the principles of mass production for simultaneous cutput of many types and sizes. Reconstruction has taken place without interrupting production.

Many types of transporting equipment have been installed, and conveyer lines extend from floor to floor throughout the entire plant. Parts now travel over dozens of meters during the processing period instead of hundreds.

The chief task was the unification of parts and technological processes. Every process had to be reorganized and adapted to the uninterrupted movement of the conveyer.

Previously, heavy parts were scoured, rinsed, and degreased in separate baths, then dried in special compartments. The equipment and technological processes required large isolated areas. However, this interfered with the maintenance of a steady pace of operations. Therefore, a completely mechanized washing-drying conveyer aggregate was developed, which is now a part of the over-all continuous production line.

Stamping, electric welding, and other technological processes are included in the conveyer circuit. Thus, a single technological line extends from the raw materials warehouse to the storehouse for ready output. Any single operation from the stamping to the assembly now takes exactly 10 seconds. Assembly of alternatingcurrent instruments takes 35 seconds.

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The systems of checking quality of parts and of inspecting ready output have been basically changed. Control points have been set up along the continuous lines and assembly conveyers. As they check the parts, the controllers register fulfillment of the schedule every hour, sending the information to the dispatching point. Earlier, the plant Department of Technical Control and representatives of the Moscow Institute of Standards and Measuring Instruments got the finished instruments in a special checking and testing shop. The items were packed there, then transported to the warehouse manually This shop has now been abolished. The workers of the plants Department of Technical Control and the state controllers get the finished instruments on the assembly conveyers. The items are also packed on the conveyer, after which a transporter takes them to the warehouse. As a result, the total length of time consumed by checking, testing, and packing operations has been reduced from 3 days to 20 minutes.

Certain changes which are of great importance in continuous conveyer methods of production have been made in intra-plant planning. Calendar plans are kept in the shops to determine the variety of types and quantity of parts necessary every month for assembly and replenishment of reserve stock. Besides, planned schedules for every conveyer line are set up by the hour, shift, and month.

As a result of conversion to the conveyer system, reduction of the production cycles, and improvement of planning, the need for great accumulations of parts has fallen cff. Uncompleted production has dropped from a 60-day to a 30-day volume. Capital turnover has been cut from 158 to 90 days, and $4\frac{1}{2}$ million rubles have been made available as a result.

The example of the Moscow Instruments Plant shows what inexhaustible possibilities for steady growth of production are opened up by technical progress. In comparison with 1947, the plant has increased output of electrical measuring instruments more than $4\frac{1}{2}$ times. Labor productivity has been tripled. The production cycle has been cut from 16-20 days to an average of 1 day. Production costs have been lowered 60 percent. The plant puts out instruments of almost 300 different types and sizes.

It is easy to see what savings could be effected in the national economy if such conveyer methods were in use throughout the entire machine and instrument building industry. The All-Union Scientific Engineering-Technical Association of Instrument Builders is devoting much attention to propagandizing the experiences of the Moscow Instruments Plant. At the instigation of the association, the plant is constantly visited by workers from related plants, scientific research institutes, and planning organizations, and by instructors and students from higher technical training institutions.

Measures are being taken for organized extension of the work of the Moscow plant. In the plan for developing new techniques which was worked out by the ministry in 1950, a special section was devoted to the introduction of continuous conveyer methods. According to this plan, the enterprises of the ministry were divided into several groups, depending on the nature of their production. One plant was selected from each group to serve as a model for the others to follow in an attempt to improve their production.

This arrangement is already producing results. Other plants are utilizing the experiences of the Moscow plant. According to the plan of the ministry, 55 continuous assembly lines must be set up in the plants this year. By 1 July, 24 had been started. The introduction of conveyer methods will save more than 6 million rubles this year. Besides, the labor of the workers will be considerably lightened, technological cycles will be cut down, and working conditions will be greatly improved. Much more output will be produced from the same production area. -- I. Geras imov

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PRODUCE NEW FLAMELESS HEATING STOVE -- Moscow, Vechernyaya Moskva, 19 Aug 50

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Making use of the experience of scientists of the Power Engineering Institute of the Academy of Sciences USSR, specialists at the Moscow Gazopribor Plant have designed and put into operation a small, table-model heating stove for flameless burning of natural gas. It can now be seen on workbenches at the plant.

The new stoves do not have the failings of the older heating appliances which were of the simplest types, like metal boxes with ordinary gas burners. They were larger, used more gas, and had poor heat radiation.

In the recent model, no flames can be seen, although the inside temperature becomes quite high. It uses only one fourth as much gas as previous models, and requires only $l\frac{1}{2}$ minutes for initial heating. It has been approved and certified by the Mosgaz Trust.

Many Stakhanovites who have begun to use the new stoves have increased labor productivity, and are saving gas fuel. Use of the stove will permit the plant to save many thousands of cubic meters of high-caloric fuel per year.

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